

What is claimed is:

505
52 → 1. A teaching model generating device for image processing, in which an object or an article having the same shape as that of the object is selected as a reference object, and three-dimensional position and/or posture of said object is recognized by carrying out matching processing of a plurality of teaching models, which were generated and stored in advance on the basis of the respective image data produced by taking the image of said reference object from a plurality of directions, with the image data including the object,

wherein one of the reference object and the image pickup means is fixed in place, while the other is fixed to a movable part of a robot or is grasped with a hand of the robot, and said robot is operated for positioning to a plurality of image pickup positions where direction of the optical axis of said image pickup means with respect to the reference object is different from one another respectively, so that the image data respectively obtained at each of said image pickup positions is stored as a teaching model.

2. A teaching model generating device for image processing, in which an object or an article having the same shape as that of the object is selected as a reference object, and three-dimensional position and/or posture of said object is recognized by carrying out matching processing of a plurality of teaching models, which were generated and stored in advance on the basis of the respective image data produced by taking the image of said reference object from a plurality of directions, with the image data including the object,

wherein the reference object is fixed to a movable part of a first robot or is grasped with a hand of the first robot, and an image pickup means is fixed to a movable part a second robot or is grasped with a hand of the second robot, and

any one of or both of said first and second robots is operated for positioning to a plurality of image pickup positions where direction of the optical axis of said image pickup means with respect to the reference object is different from one another respectively, so that the image data respectively obtained at each of said image pickup positions is stored as a teaching model.

a 3. A teaching model generating device according to ^{Claim 1}~~claims 1 or 2~~, wherein said teaching model is a part of the image data of the reference object.

a 4. A teaching model generating device according to ^{Claim 1}~~claims 1 or 2~~, wherein said teaching model is composed of data obtained by performing a image processing on the image data of the reference object.

a 5. A teaching model generating device according to ^{Claim 2}~~claims 1 or 2~~, wherein said teaching model is generated for every direction in which said image pickup means took the image of said reference object and said teaching model is stored in association with the information on the direction.

a 6. A teaching model generating device according to ^{Claim 2}~~claims 1 or 2~~, wherein said image pickup means is a camera.

a 7. A teaching model generating device according to ^{Claim 2}~~claims 1 or 2~~, wherein said image pickup means is a three-dimensional visual sensor whose image pickup means measures the distance between the image pickup means and a plurality of points on the object.